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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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TECHNOLOGY, PATENTS AND LICENSING, INC./PRIME			MANNING, JOHN	
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DOYLESTOWN ROAD, PA 18901			2614	

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/766,004	<b>Applicant(s)</b> SCHLACK, JOHN A.	
	<b>Examiner</b> John Manning	<b>Art Unit</b> 2614	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-35 and 37-38 is/are rejected.
- 7) ☒ Claim(s) 15 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/14/00, 6/16/00</u> | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 9, 11-14, 16-20, 21, 31-35 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. (US Pat No 6,463,585) in view of Eldering (WO 00/33233).

Regarding Claim 1, Hendricks discloses a system for delivering targeted advertisements to subscribers (Col. 26, Lines 14-18) in a television service network environment (Col. 9, Lines 23-26), the system comprising an ad scheduler (Col. 27, Lines 48-50) for providing an ad schedule (switching plan, Col. 28, Lines 1-13 and Col. 26, Line 36-41) based on various targeting criteria (Col. 27, Lines 52-55), where the subscriber groups are characterized by a market segment (demographics and viewing habits of a user) (Col. 26, Lines 24-

30). Such viewing habits may include channels a user watched and for how long and what the user tuned to during a commercial break (Col. 20, Lines 20-25). What is not disclosed, however, is that the grouped are characterized by a probabilistic measure of expected viewership. Eldering discloses a subscriber identification system that monitors the activity of the users and characterizing a group by a probabilistic measure of viewership (Page 4, Lines 33-34, Page 5, Lines 1-16; Also see Figures 3 and 6A). Eldering further discloses processing the channel change data (See Figure 6A and Page 8, Lines 17-27) in order to generate a correlation between the subscriber's income and channel change frequency (Page 10, Lines 27-34, Page 11, Lines 1-3). Using the subscriber selection data, the system can determine which subscriber is most likely to be viewing the programming (Page 11, Lines 4-27). Eldering is evidence that one of ordinary skill in the art would have recognized the benefits of identifying the probabilities of subscribers who would likely change their channels in a subscriber profiling system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hendricks with characterizing a group by a probabilistic measure of viewership of Eldering in order to better identify subscribers in order to more effectively target advertising. Hendricks further discloses a multiple presentation stream generator (See Figure 1, Operations Center 202) for generating a plurality of presentation stream groups. The operations center creates television program and control information signals (Col. 10, Lines 61-67) and sends groups of

programming to a plurality of head-ends (Col. 12, Lines 10-13 and Col. 13, Lines 9-15). As stated above, each stream group contains a plurality of television programs and control data. As is well known in the art, such television programs are broadcast to users on channels. This reads on the claimed stream groups corresponding to a particular programming channel. Each stream group comprises a plurality of television programs as stated above and it is implicit that each head-end is operable to receive the same television programming due to the fact that the operation center *may* send different groups of programs to different head-ends (Col. 12, Lines 10-13). This reads on the claimed each presentation stream group being composed of a plurality of multiple presentation streams (different television programs) that are carrying the same programming. It is inherent that a single television program transmitted to two different head-ends would have the same avails, that is, commercial breaks scheduled at certain times in the program, due to the fact that television shows are created with such avails in mind. Hendricks further discloses that the operation center may customize the packaging of programs for different markets (Col. 11, Lines 16-22) and that the advertisement placed in a commercial break is a default targeted ad that is most appropriate for the audience (Col. 27, Lines 56-62). This reads on the claimed each presentation stream (television program) carrying advertisements directed to different advertiser-specific market segments (overall audience) according to the ad schedule.

Regarding Claim 2, Hendricks discloses a system as stated above in Claim 1, further comprising at least one routing station (See Figure 1, head-end 208) for receiving the plurality of presentation stream groups from the MPS generator (Col. 13, Lines 8-12) and a delivery network (via satellite 206) coupled to the generator and the routing station (Col. 13, Lines 8-15) for delivering the plurality of presentation stream groups from the MPS generator to the routing station.

Regarding Claim 9, Hendricks discloses a system as stated above in Claim 2, wherein the operation center is operable to deliver content directly to the set top terminal (Col. 15, Lines 14-17 and Col. 18, Lines 20-28). This reads on the claimed routing station being located at a set top box.

Regarding Claim 11, Hendricks discloses a system as stated above in Claim 2, wherein video data is transmitted from the operations center to the head end using compressed digital data on a satellite transmission (Col. 9, Lines 26-33). This reads on the claimed delivery network being a digital broadcast satellite network.

Regarding Claims 12 and 13, Hendricks discloses a system as stated above in Claim 1, wherein the system gathers data including what channels a user watched and for how long (Col. 20, Lines 20-23). Hendricks further discloses a switching plan, as stated above, that is developed at the operations center to direct terminals to different ads at program breaks (Col. 26, Lines 37-41). Further, the occurrence of program breaks is known (Col. 27, Lines 31-32)

and the spot placement engine uses break timing and feeder channel availability information in order to determine optimum spot placement (Col. 27, Lines 48-50). This break (avail) timing information identifies the time durations between adjacent avails in each presentation stream such that the spot placement engine can allocate feeder channels to service the breaks at the correct times. Eldering discloses a subscriber identification system that monitors the activity of the users and generates profiles including channel change information (Page 4, Lines 33-34, Page 5, Lines 1-16) and the corresponding time (See Figures 3 and 6A). Eldering further discloses processing the channel change data (See Figure 6A and Page 8, Lines 17-27) in order to generate a correlation between the subscriber's income and channel change frequency (Page 10, Lines 27-34, Page 11, Lines 1-3). Using the subscriber selection data, the system can determine which subscriber is most likely to be viewing the programming (Page 11, Lines 4-27). This reads on the claimed channel change statistical information identifying probabilistic percentages of subscribers (See Figure 6F) who would likely change their channels during different time durations (See Figures 3 and 6A). Further, it is well known in the art to use an average percentage when analyzing the probabilities of certain groupings as shown in Figure 6F.

Regarding Claim 14, Hendricks in view of Eldering disclose a system as stated above in Claim 12. Hendricks further discloses a system wherein exact timing information of each avail is known as stated above. The time duration between adjacent avails inherently corresponds to the time duration from the end

of one ad to the start of another ad because there must always be a measurable period of time between different advertisements. The claimed duration could be anything from zero seconds (back-to-back ads) to any number of minutes between ads.

Regarding Claim 16, Hendricks discloses a system as stated above in Claim 1, further comprising a storage unit coupled to the MPS generator for storing a library of advertisements to be inserted into the presentation streams (Col. 11, Lines 5-15).

Regarding Claim 17, Hendricks discloses a system as stated above in Claim 1, further comprising a data collector for collecting channel change data from a group of subscribers (Col. 20, Lines 10-27) and a statistics module, coupled to the data collector, for performing calculations on the channel change data and thereby generating channel change statistical information (Col. 20, Lines 28-35).

Regarding Claim 18, Hendricks discloses a system as stated above in Claim 17, wherein a collection module receives programs watch data from the set top terminals (Col. 33, Lines 31-32). Further, the data is only received during regular polling cycles (Col. 13, Line 60 – Col. 14, Line 12 and Col. 68, Line 39 – Col. 69, Line 46). Therefore, the set top must collect the programs watched data and store it until the head end polls it (Col. 63, Lines 15-35). This reads on the claimed data collector being located at the set top box. Each set top terminal is operable to build a profile for each viewer and store the profile in memory



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according to the viewer's name (Col. 66, Lines 37-51). Because the set top is operable to store a plurality of different demographic profiles including programs watched data, this reads on the claimed data collector for collecting channel change data from a group of subscribers.

Regarding Claim 19, Hendricks discloses a system as stated above in Claim 17, wherein each head end compiles viewer data (Col. 20, Lines 4-11). This reads on the claimed data collector being located at a head end of a television programming delivery system.

Regarding Claim 20, Hendricks discloses a system as stated above in Claim 19, wherein the network controller (214) in the head-end (208) is operable to utilize demographic information to target commercials to subscribers (Col. 58, Lines 10-17 and Col. 63, Lines 60-67). The network controller processes the data (Col. 65, Lines 47-48) and stores the analyzed data in the viewer profile database (Col. 66, Lines 16-66), including reviewing a user's program watched data and statistically comparing it with a test group. This reads on the claimed statistics module located at the head end.

Regarding Claim 21, see Claim 1 above.

Regarding Claims 31-33, see Claims 17-19 above, respectively.

Regarding Claim 34, see Claim 12 above.

Regarding Claim 35, see Claim 14 above.

Regarding Claim 37, see claim 13 above.

Regarding Claim 38, see Claim 16 above.

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4. Claims 3-8 and 22-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. in view of Eldering ('233) and further in view of Freeman et al. (US Pat No. 6,181,334).

Regarding Claim 3, Hendricks discloses a system as stated above in Claim 1, wherein the routing station (head-end) is operable to make on-the-fly programming changes in accordance with a user request for the purposes of interactive television services (Col. 14, Lines 13-24). What is not disclosed in the aforementioned combined teaching, however, is a plurality of routing units for receiving the plurality of presentation stream groups (data transmitted from the operations center), wherein one of the routing units selectively switches between the presentation streams (television programming) in the stream group, only in response to a channel request from a subscriber served by the routing station. Freeman discloses a cable television system (See Figure 1) wherein a plurality of video signals are provided (Col. 4, Lines 17-31) for interactive use. Further disclosed is that video signals are routed to a central switching station such that switching between various videos is accomplished at the head end rather than at the receiver (Col. 8, Lines 32-39). A user is operable to make a channel selection and the switching station routes the desired signal to the transmitter, which transmits the signal on a cable channel to the user (Col. 8, Lines 39-49). This reads on the claimed routing unit for receiving the plurality of presentation stream groups and selectively switching between the streams in response to a channel request from a subscriber. Freeman is evidence that ordinary workers in the art

would appreciate the ability to have the head end perform video switching for a user's request in an interactive television environment. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined teaching with the head end-based switching of Freeman in order to reduce complexity of the user's system and reduce bandwidth necessary to transmit the plurality of available program channels. Further, it would be obvious that multiple routing units may be used to service a large number of users.

Regarding Claim 4, Hendricks in view of Freeman disclose a system as stated above in Claim 3. Hendricks further discloses that the head-end is operable to broadcast multiple program signals to each terminal using a switching plan to target advertisements to different viewers (Col. 18, Lines 20-29). As stated above, the head-end must know where each ad is scheduled in order to generate the switching plan. This reads on the claimed ad location detector for detecting advertisement locations in the presentation stream group. In combination with Freeman, when a user selects a channel of programming, the channel is switched to and transmitted to the user and the head-end subsequently inserts targeted advertisements. This reads on the claimed detecting advertisement locations (commercial breaks) in response to the channel request and selecting one of the presentation streams that is most appropriate for the subscriber (targeted ad), generating a switching signal corresponding to that selection and switching to the stream in the group in

response to the signal. Further, there must inherently be a detection signal and switching signal communicated between the various functional elements of the head-end in order for the system to properly insert an advertisement at the proper time.

Regarding Claim 5, Hendricks in view of Freeman disclose a system as stated above in Claim 4. What is not disclosed, however, is that the ad location detector detects the advertisement locations by detecting cue tones. Official Notice is hereby taken that it is well known in the art to use cue tones to indicate the placement of an advertising break in a program. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hendricks in view of Freeman with the cue tones of the well-known prior art in order to provide for ad insertion at head ends that are not equipped to receive and process computerized schedule information.

Regarding Claim 6, Hendricks in view of Freeman disclose a system as stated above in Claim 4. Hendricks further discloses that a switching plan is generated and the head-end selects targeted advertising based on the commercial break locations as stated above. This reads on the claimed ad location detector detecting the advertisement locations based on scheduled avail information (switching plan).

Regarding Claim 7, Hendricks in view of Freeman disclose a system as stated above in Claim 4. As stated above, the head-end of Hendricks is operable to insert advertising that is targeted to users based on a profile developed from,

inter alia, previously watched program data. This reads on the claimed selector selecting a presentation stream (advertisement) by comparing market segment characteristics associated with advertising (Col. 27, Lines 48-56 and Tables D-L) corresponding to the detected advertisement locations (commercial breaks), with characteristics associated with the subscriber (user profile) served by the routing station (head-end) and by identifying a presentation stream (ad to display) based on the comparison.

Regarding Claim 8, Hendricks in view of Freeman disclose a system as stated above in Claim 7. Hendricks further discloses that the spot placed in the program break serves as a default advertisement (Col. 27, Lines 56-59). Further, a priority algorithm is put in place to device which ad to display in case of an ambiguous command to switch to two different channels (Col. 30, Lines 41-44). This reads on the claimed selector selecting a default presentation stream in the group as the most appropriate stream if the comparison does not identify a presentation stream.

Regarding Claim 22, see Claims 2-3 above.

Regarding Claim 23, see Claim 11 above.

Regarding Claims 24-28, see Claims 4-8 above, respectively.

Regarding Claim 29, see Claim 9 above.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. in view of Eldering ('233) and further in view of Eames et al. (US No 6,493,875).

Regarding Claim 10, Hendricks discloses a system as stated above in Claim 2. What is not disclosed in the aforementioned combined teaching, however, is that the routing station is located at a USAM device in a switched digital video system. Eames discloses a residential video distribution system (See Figure 2) wherein a USAM (340 and Col. 4, Lines 4-9) is used to route data to a home system including a TV (199) in a switched (Col. 2, Lines 60-63) digital video system (See Figure 3, Col. 2, Lines 64-65 and Col. 5, Lines 8-11). Eames is evidence that ordinary workers in the art would have recognized the benefits of using a USAM device in a SDV system for transporting video data to an end user. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of combined teaching with the USAM device of Eames in order to support broadband video delivery to residential customers in homes that do not have coaxial cable wiring as disclosed by Eames (Col. 1, Lines 29-33).

6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. in view of Eldering ('233) and further in view of Freeman et al. and further in view of Eames et al. (US No 6,493,875).

Regarding Claim 30, Hendricks discloses a system as stated above in Claim 2. What is not disclosed in the aforementioned combined teaching, however, is that the routing station is located at a USAM device in a switched digital video system. Eames discloses a residential video distribution system (See Figure 2) wherein a USAM (340 and Col. 4, Lines 4-9) is used to route data

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to a home system including a TV (199) in a switched (Col. 2, Lines 60-63) digital video system (See Figure 3, Col. 2, Lines 64-65 and Col. 5, Lines 8-11). Eames is evidence that ordinary workers in the art would have recognized the benefits of using a USAM device in a SDV system for transporting video data to an end user. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of combined teaching with the USAM device of Eames in order to support broadband video delivery to residential customers in homes that do not have coaxial cable wiring as disclosed by Eames (Col. 1, Lines 29-33).

### ***Allowable Subject Matter***

7. As previously indicated, Claims 15 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 571-272-7352. The examiner can normally be reached on M-F: 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JM



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January 21, 2006

A handwritten signature in black ink, appearing to read 'J. Miller', with a long horizontal line extending to the right.

**JOHN MILLER**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**